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PATENT APPLICATION  
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**REMARKS**

This Application has been carefully reviewed in light of the Office Action mailed May 5, 2004 ("Office Action"). In the Office Action, Claims 1-26 are pending in the Application. The Examiner rejects Claims 1-26 and objects to Claim 10. Applicants have amended Claims 1, 8, 10, 11, and 19. Applicants submit that no new matter has been added with these amendments. As described below, Applicants believe all claims to be allowable over the cited references. Therefore, Applicants respectfully request reconsideration and full allowance of all pending claims.

**Section 112 Rejections**

The Examiner rejects Claim 8 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Examiner rejects Claim 8 because the Examiner identifies a discrepancy between the ranges specified in the claim and the ranges described on page 8, lines 24-31 of the Specification. Applicants appreciate the Examiner bringing this typographical error to Applicants' attention. Applicants note, however, that in the Examiner's rejection of Claim 8 the Examiner has misquoted page 8, lines 24-31 of Applicants' Specification, which states:

At step 306, a received signal that requires amplification is split into voice and data bands. As described above, a DSL signal may comprise a voice band of zero to approximately 4 kilohertz and a data band of approximately 25 kilohertz to 1.1 megahertz for transmission of data signals. Alternatively, a DSL signal may include only data with no voice signal. In such a case, step 306 is not utilized.

Applicants have amended Claim 8 such that there is no discrepancy between the range specified in the Specification and the range stated in the claim. Applicants respectfully request reconsideration and allowance of Claim 8.

The Examiner rejects Claim 10 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants have amended Claim 10 to correct the

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antecedent basis issue identified by the Examiner. Applicants respectfully request reconsideration and allowance of Claim 10.

**Section 103 Rejections**

The Examiner rejects Claims 1, 3-6, and 11-17 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,236,664 issued to Erreygers ("*Erreygers*"), and further in view of U.S. Patent No. 6,088,385 issued to Liu ("*Liu*"). Applicants respectfully request reconsideration and allowance of Claims 1, 3-6, and 11-17 for the following reasons.

First, Applicants respectfully submit that the proposed combination of references do not disclose, teach, or suggest each and every limitation recited in Applicants' claims. For example, Claim 1, as amended, recites:

A method for providing greater reach of a DSL signal comprising:  
receiving an incoming DSL signal including a data signal;  
demodulating the data signal;  
requantizing the demodulated data signal by conditioning the data signal to acquire underlying data in the data signal;  
modulating the requantized data signal;  
amplifying the modulated requantized data signal; and  
transmitting the amplified signal in a regenerated form.

Applicants respectfully submit that neither *Erreygers* nor *Liu* disclose, teach, or suggest "requantizing the demodulated data signal by conditioning the data signal to acquire underlying data in the data signal," as recited in amended Claim 1. In the Office Action, the Examiner acknowledges that *Erreygers* does not disclose, teach, or suggest the recited limitation. Rather, the Examiner relies on *Liu* for disclosure of the claimed features. *Liu*, however, merely discloses a "high speed modem . . . that implements a scalable data rate ADSL link." (Abstract). Specifically, the high speed modem "adjusts the data rate of an xDSL link by providing two time scaling factors M and M' in the receive and transmit directions respectively. (Column 5, lines 34-36). "These two factors are determined by estimating available signal processing power of a communications

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system to represent the fractional capabilities of the particular transceiver in question compared to a nominal full xDSL data rate implementation." (Column 5, lines 36-41). Thus, scalability is determined based on the capability of the transceiver. To this end, the M and M' factors are determined prior to initiation of the link and "are communicated to an upstream transceiver during a hand-shaking procedure so that any data link established is data rate constrained to match the downstream transceiver's signal processing capability." Accordingly, Applicants respectfully submit that the proposed *Erreygers-Liu* combination does not disclose, teach, or suggest "requantizing the demodulated data signal by conditioning the data signal to acquire underlying data in the data signal," as recited in Applicants' Claim 1.

For similar reasons, Applicants believe independent Claim 11 is allowable over the proposed *Erreygers-Liu* combination. As one example, neither *Erreygers* nor *Liu* disclose, teach, or suggest "requantizing the demodulated data portion by conditioning the data portion to acquire underlying data in the data portion," as recited in amended independent Claim 11. As discussed above, the Examiner specifically relies on *Liu* for disclosure of the recited features. Because *Liu* merely discloses a "high speed modem . . . that implements a scalable data rate ADSL link" based on the capability of the processing system" (Abstract), Applicants respectfully submit that the proposed *Erreygers-Liu* combination does not disclose, teach, or suggest "requantizing the demodulated data portion by conditioning the data portion to acquire underlying data in the data portion," as recited in amended independent Claim 11.

With regard to independent Claim 16, Applicants submit that the rejection of Claim 16 is improper at least because the Office Action has failed to make a *prima facie* case of equivalence as required by M.P.E.P. § 2183 for any of the 35 U.S.C. § 112, paragraph 6 claim limitations. The M.P.E.P. states that "the examiner should provide an explanation and rationale in the Office action as to why the prior art element is an equivalent. The Examiner has provided no such rationale for any of the 35 U.S.C. § 112, paragraph 6 claim limitations of Applicants' Claim 16. For at least this reason, Applicants respectfully submit that Claim 16 is allowable. Favorable action is requested.

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Dependent Claims 3-6, 12-15, and 17 depend from independent Claims 1, 11, and 16, respectively. Since Claims 3-6, 12-15, and 17 incorporate the limitations of their respective independent claims, which Applicants have shown above to be allowable, Claims 3-6, 12-15, and 17 are allowable for at least this reason. Additionally, Applicants respectfully submit that Claims 3-6, 12-15, and 17 also recite features that are not disclosed, taught, or suggested in the proposed *Erreygers-Liu* combination. Because Applicants have shown the independent claims to be allowable, however, Applicants have not provided detailed arguments with respect to Claims 3-6, 12-15, and 17. Applicants remain ready to do so if it becomes appropriate.

Second, assuming for purposes of argument only that the proposed combination discloses the limitations of Applicants' claims, which Applicants dispute, it would not have been obvious to one skilled in the art to make the proposed *Erreygers-Liu* combination. The mere fact that references can be combined does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). The showing must be clear and particular. *See, e.g., C.R. Bard v. M3 Sys., Inc.*, 48 USPQ.2d 1225, 1232 (Fed. Cir. 1998). The Examiner has not provided adequate evidence of the required motivation or suggestion to make the proposed combination. The Examiner merely speculates "it would have been obvious" to combine the transceivers disclosed in *Liu* with the repeater disclosed in *Erreygers* "for the purpose of implementing flexible and scaleable transceivers in the receiver." (Office Action, page 4). The Examiner has not shown any motivation or suggestion in either reference or any other reference or provided any evidence showing existence in the art of a motivation or suggestion to make the proposed *Erreygers-Liu* combination, however, and instead simply relies upon hindsight.

It is improper for an Examiner to use hindsight having read the Applicants' disclosure to arrive at an obviousness rejection. *In re Fine*, 837 F.2d 1071, 1075, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). It is improper to use the claimed invention as an instruction manual or template to piece together the teachings of the prior art so that the claimed invention is rendered obvious. *In re Fritch*, 972 F.2d 1260, 23 U.S.P.Q.2d 1780 (Fed. Cir. 1992). Because the Examiner has merely used Applicants' claims as an

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instruction manual to piece together the repeater disclosed in *Erreygers* with the scalable transceivers disclosed in *Liu*, Applicants respectfully submit that the proposed *Erreygers-Liu* combination is improper and should not be used here to reject Applicants' claims.

For at least these reasons Applicants respectfully request reconsideration and allowance of Claims 1, 3-6, and 11-17.

The Examiner rejects Claims 18-25 under 35 U.S.C. § 103(a) as being unpatentable over *Erreygers*, and in view of *Liu*, and further in view of U.S. Patent No. 6,658,049 issued to McGhee et al. ("*McGhee*"). Applicants respectfully request reconsideration and allowance of Claims 18-25 for the following reasons.

First and with regard to Claim 18, Applicants submit that the rejection of Claim 18 is improper at least because the Office Action has failed to make a *prima facie* case of equivalence as required by M.P.E.P. § 2183 for any of the 35 U.S.C. § 112, paragraph 6 claim limitations. The M.P.E.P. states that "the examiner should provide an explanation and rationale in the Office action as to why the prior art element is an equivalent. The Examiner has provided no such rationale for any of the 35 U.S.C. § 112, paragraph 6 claim limitations of Applicants' Claim 18. For at least this reason, Applicants respectfully submit that Claim 18 is allowable. Favorable action is requested.

Second and with regard to Claims 19-25, Applicants respectfully submit that the proposed combination of references do not disclose, teach, or suggest each and every limitation recited in Applicants' claims. As one example, the cited references does not disclose, teach, or suggest "the first conditioning circuit being operable to . . . demodulate, requantize, and remodulate the first data signal to produce a first remodulated data signal, the first data signal requantized to acquire underlying data in the first data signal," as recited in amended independent Claim 19. As a further example, the cited references do not disclose, teach, or suggest "the second conditioning circuit being operable to . . . demodulate, requantize, and remodulate the second data signal to produce a second remodulated data signal, the second data signal requantized to acquire underlying data in the second data signal," as recited in amended independent Claim 19. In rejecting Claim 19, the Examiner relies on *Liu* for disclosure of the recited features. As discussed above

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with regard to Claim 1, however, *Liu* merely discloses a "high speed modem . . . that implements a scalable data rate ADSL link" based on the capability of the transceiver. (Abstract). Accordingly, for reasons similar to those discussed above with regard to Claim 1, Applicants respectfully submit that the recited features are absent from the disclosure of *Liu*.

Claims 20-25 depend from independent Claim 19. Since Claims 20-25 incorporate the limitations of independent Claim 19, which Applicants have shown above to be allowable, Claims 20-25 are allowable for at least this reason. Additionally, Applicants respectfully submit that Claims 20-25 also recite features that are not disclosed, taught, or suggested in the proposed *Erreygers-Liu-McGhee* combination. Because Applicants have shown independent Claim 19 to be allowable, however, Applicants have not provided detailed arguments with respect to Claims 20-25. Applicants remain ready to do so if it becomes appropriate.

Third, assuming for purposes of argument only that the proposed *Erreygers-Liu-McGhee* combination discloses the limitations of Applicants' claims, which Applicants dispute, it would not have been obvious to one skilled in the art to make the combination. Applicants reiterate the standards discussed above for combining references. In the Examiner's rejection of Claims 18-25, the Examiner has not provided adequate evidence of the required motivation or suggestion to make the proposed combination. The Examiner merely speculates "it would have been obvious to . . . provide means to split/recombine/amplify the voice and data signals after being processed by the repeater for the purpose of allowing the repeater to be used on DSL lines that contain both data and voice signals." (Office Action, page 6). The Examiner has not shown any motivation or suggestion in either reference or any other reference or provided any evidence showing existence in the art of a motivation or suggestion to make the proposed *Erreygers-Liu-McGhee* combination, however, and instead simply relies upon improper use of hindsight.

For at least these reasons Applicants respectfully request reconsideration and allowance of Claims 18-25.

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**CONCLUSION**

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other reasons clearly apparent, Applicants respectfully request full allowance of all pending claims.

If the Examiner feels that a telephone conference would advance prosecution of this Application in any manner, the Examiner is invited to contact Brad P. Williams, Attorney for Applicants, at the Examiner's convenience at (214) 953-6447.

The required fee of \$180.00 is submitted herewith for the IDS and is believed to be correct. The Commissioner is hereby authorized to charge any other fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,  
BAKER BOTTS L.L.P.  
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